

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.



166.3  
MC8  
no. 58  
cop. 2

166.3  
MC8  
no. 58

cop. 2

HOW PURCHASING  
COOPERATIVES ARE

CONSERVING  
FARM EQUIPMENT

BY GERALD M. FRANCIS  
AGRICULTURAL ECONOMIST

COOPERATIVE RESEARCH AND SERVICE DIVISION  
FARM CREDIT ADMINISTRATION  
U. S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C.

MISCELLANEOUS REPORT NO. 58

INV. '60

JULY 1942

## CONTENTS

	Page
Ways of reducing the steel requirements of agriculture .....	2
How farm supply cooperatives can help .....	3
Machinery conservation programs of whole- sale cooperatives .....	5
Indiana Farm Bureau cooperatives .....	5
Ohio Farm Bureau cooperatives .....	11
Michigan Farm Bureau cooperatives .....	13
Farmers Union Central Exchange, St. Paul, Minn. .....	14
Machinery services by two local cooperatives .....	17
An expanding need for cooperative effort .....	20

## HOW PURCHASING COOPERATIVES ARE CONSERVING FARM EQUIPMENT

By

Gerald M. Francis  
Agricultural Economist

Serious shortages have developed in vital defense materials since the United States entered the war in December 1941. Steel is one of these basic materials. Agriculture uses large quantities of steel products such as tractors, implements, and other machinery in its ordinary production activities. Therefore, as a part of our war effort, a Nation-wide campaign has been undertaken to conserve all types of farm equipment.

This program, largely initiated by official action of the United States Department of Agriculture, has been adopted and pushed vigorously by many agencies that work closely with or for farmers. These include the Federal and State agricultural extension services, farm machinery manufacturers and their distributors, and the farmers' cooperative purchasing associations.

In a number of States farmers' cooperative associations for some years have distributed to their members and other patrons machinery, tractors, and general farm equipment, such as water tanks, steel posts, bale ties, and other metal products.<sup>1/</sup> They have also serviced and repaired this machinery and equipment in their own repair shops with their own facilities and personnel. As a result, many supply cooperatives are in a position to help farmers now, not only to obtain new equipment or good used implements, but also to extend the life of their old machinery.

This report has been prepared to make available a brief summary of the methods by which a number of associations are helping farmers to meet the wartime crisis in machinery and equipment. In making the survey, managers and other employees were interviewed. Descriptions of the methods and facilities used to maintain successful repair and maintenance services are herein described.

---

<sup>1/</sup> For a more complete account of these activities see:  
Francis, G. M., Distribution of Machinery by Farmers Cooperative Associations, F.C.A. Circ. C-125, 57 pp., illus.

## WAYS OF REDUCING STEEL REQUIREMENTS

A variety of ways have been proposed, both to conserve and to utilize more fully existing farm equipment and thus to cut down on agricultural demands for new steel products. Some of these ways are:

1. Holding periodic machinery demonstration schools and repair clinics to instruct farmers in approved methods of using, repairing, and conserving their equipment to extend its period of usefulness. Farm machinery, like automobiles, can be used a long time if care is exercised in its operation and maintenance.
2. Organizing used-machinery exchanges where farmers can list for sale machinery they no longer need and also find used pieces of equipment they desire to buy. Cooperatives especially have already provided this service for their members and other patrons.
3. Rebuilding old implements from parts of worn-out units. This method of conservation, while adopted to a considerable extent by some local machinery dealers, probably has not been used nearly as often by dealers or farmers as it will be when machinery plants are fully converted to war production.
4. Salvaging all discarded metal from nonusable equipment to make it available for use in new construction. The salvage program, which has been actively promoted by many cooperatives, will, if continued at the present rate, materially increase the amounts of metal available, above war needs, for farm equipment manufacture. Estimates at the time the United States entered the war indicated that at least 10 to 15 million tons of scrap metal could be found in rural areas and that the 100-percent salvage of this scrap reserve will require at least another year.
5. Encouraging farmers to anticipate their needs for new machinery and parts by placing their orders early so that the steel industry may know their requirements. This method has been used successfully in many areas during the early months of 1942 and will be doubly important in establishing priority ratings for new machinery and parts for 1943.
6. Effecting "full-load" employment of all farm equipment during its seasonal period of use. This may be accomplished both by joint ownership and use of machinery wherever possible by farmers in neighborhood groups and by loaning or renting farm equipment when it is not in use.

How much the demand for new equipment can be reduced by following these six procedures is uncertain. Many farmers are accustomed each season to use their machinery every daylight hour. But during the 1942 planting, cultivating, and harvesting seasons, many tractors and much other equipment are being used also at night whenever lighting is available. The extent to which equipment can be conserved further by community machinery exchanges and cooperative ownership and joint use depends on a number of factors, such as size and types of farms, financial status of farmers, cultural and social relations in farming communities, and willingness of farmers to cooperate and plan in alternating their equipment needs during the war.<sup>2/</sup>

These general methods for conserving machinery and restricting agriculture's demand for new equipment might be effective in reducing the 1942 demand as much as 25 to 40 percent below the average annual purchases between 1937 and 1940. However, the possibility of further expansion in food production and further shortages of farm labor are additional factors which enter the picture. For these reasons it may be advisable to build up a detailed tabulation of the volume of various types of farm equipment purchased by farmers during 1942 as a gauge of the effectiveness of current conservation efforts. On the basis of this information and of reports by farmers in the autumn of 1942 as to their probable needs for replacing outworn equipment for 1943, it should be possible to arrive at fairly accurate estimates of the total volume of farm equipment needed in 1943. No organizations are better equipped with adequate records than are cooperative purchasing associations to assist in tabulating such information.

#### HOW FARM SUPPLY COOPERATIVES CAN HELP

Farm supply cooperatives engaged in distributing machinery and related equipment face uncertain prospects for the duration of the war. Their equipment business in 1942 has been curtailed

---

<sup>2/</sup> Experience with cooperative ownership and use of farm machinery has been scattered and no comprehensive summary of its results is available. However, the performance of small machinery service cooperatives set up under supervision of the Farm Security Administration is of interest. It was reported that "these little neighborhood co-ops own an average of one and a half pieces of equipment each, and each has about 8 users. A summary of the group machinery services set up through 1940 showed that the average cost of their equipment was \$676, but the cost to each member was only \$58. If each member had bought the equipment by himself, he would have had to pay nearly 12 times as much as it cost him to get part ownership and part-time use through the community service." For this and other examples see Proceedings, American Institute of Cooperation, 1942, "How Farm Security Administration Programs Fit Into Agricultural Cooperation," by R. W. Hudgens, Assistant Administrator.

to some extent by their inability to obtain new merchandise. They were able, however, to get enough implements and repair parts in the early months of the year to conduct an almost normal business.

The progressive conversion of manufacturing plants to arms production and war priorities on all steel output will probably confront machinery distributors and farmers with more serious problems in 1943. Most farm supply cooperatives may be in the position of other "small businesses," such as automobile and automotive equipment distributors, who have found it difficult to convert to war production work when deprived of their usual lines of merchandise.

Therefore the apparent duty of supply cooperatives that handle farm equipment is to adapt their methods to the times and introduce such additional services as will enable farmers to obtain the necessary parts and implements for wartime production. Some cooperatives already have been leaders in their communities in promoting conservation methods. Many others are ideally situated to switch their type of services, because of their experience in handling machinery or servicing automobiles at retail filling stations. Many of them will be able to expand their retail machinery contacts during the war period, as a by-product, and expand their prospective market for new machinery and tractors in the post-war period.

The following pages summarize some of the programs being used in a number of cooperative supply associations to continue their machinery service to their members during the war and to build new services for the future.

## MACHINERY CONSERVATION PROGRAM OF WHOLESALE COOPERATIVES

Among the cooperative programs already set up for conserving farm machinery are those of the county farm bureau cooperatives in Indiana, Ohio, and Michigan, and the Farmers Union Central Exchange, St. Paul, Minn. These programs vary somewhat within the different States but all lean heavily on the repairing and servicing angles.

### Indiana Farm Bureau Cooperatives

County farm bureau cooperatives in Indiana are employing a variety of methods to meet the crisis in farm equipment and to keep abreast of increased farm demands for machinery repair and conservation services. The Indiana Farm Bureau Cooperative Association in furthering its cooperative machinery program of more than 10 years, is helping these member cooperatives to solve their service and parts problems and to train local machinery men. For example, in January 1942 this State association at its annual machinery-repair school instructed 35 servicemen from county associations in methods of assembling co-op tractors and other farm equipment handled by the cooperatives.

Another service of the State cooperative is in repairing in its shop tractors and implements brought in from nearby associations. Services of this shop are utilized mainly by nearby cooperatives that have not acquired mechanics and repair equipment of their own. The central organization sometimes acquires and reconditions used tractors and implements for resale. It likewise serves as a clearing-house of information between cooperatives regarding used equipment needed or available for sale. This practice grew out of the regular field visits of machinery sales and servicemen, who, under normal conditions of new machinery distribution, contact the county associations at regular intervals and note their principal requirements.

With much less new machinery available in 1942, the association is placing greater emphasis on servicing used machinery. Orders by county cooperatives for certain implements and repair parts since January 1, 1942, have frequently outstripped available supplies. Since new equipment will probably become even scarcer as the war continues, the aim is to help more cooperatives to prepare themselves to render repair services on all types of farm equipment.

About 30 county farm bureau cooperatives for several years have held an agency contract with their wholesale organization to distribute its full line of machinery and tractors. This contract requires them to maintain a full-time serviceman to set up and repair implements. About 25 county associations in recent years have sold some equipment and parts, although they have not provided repair services. Officials of the Indiana Farm Bureau

Cooperative Association are gradually developing active machinery services with repairmen in enough of the 89 county cooperatives to provide farmers in every part of the State with cooperative repair facilities.

A number of Indiana county farm bureau cooperatives also are providing special repair shop services for their patrons. A description of the machinery shops and services in four of these illustrate what cooperatives generally can do to meet farmers' needs for these services.

#### Howard County Program

Started in 1937

Howard County Farm Bureau Cooperative Association, Kokomo, Ind., started its machinery repair shop in 1937 at the time it began handling implements. Its volume of sales in machinery has remained small -- less than \$10,000 in 1941 in a total sales volume of \$151,000. The repair shop, which is housed in a building about 30 by 120 feet located in the business center of town, has expanded its services. Until late in 1941 only the front half of the building was used, but by December the increase in repair work and in facilities necessitated renting the rear half of the building and equipping it with repair facilities.

Shop work has included general repair of implements, welding service, and complete overhauling of tractors. The cooperative is equipped for both electric and acetylene welding, and it has its own generator to supply its needs for acetylene gas. In February 1942 blacksmith equipment, including a forge and anvil, was installed and an experienced blacksmith employed to rebuild plow points, shoe horses, and repair general equipment.

The shop manager started with the cooperative in 1937 after about 15 years' experience as a welder in small repair shops. He built up the co-op's repair business through his ability to salvage broken machinery. An example of this is the repair of worn plowshares by welding to them new points of hardened steel (Stellite). This service was reported to be in greater demand in 1942 because of the growing shortage of new plowshares.

In addition to the manager, repair work keeps three other men busy. One man specializes in motor overhauls, mainly on tractors; the second is a welder and general repair helper; and the third is the blacksmith. All these men are paid on a weekly wage basis, except the blacksmith who gets 75 percent of his charges for job work, less one-half the cost of materials used. Unfortunately, the association's bookkeeping system has not provided enough detail to permit separate operating statements for the machine shop.

Patronage of the shop has increased regularly year by year. Farmers need this type of service in their supply cooperative as shown by their increasing demand for more diversified services. For example, during an hour's visit to the shop, three farmers came in for minor repairs. One of them needed a welding job on a plow part, and the other two asked for replacement parts. In response to inquiries, these farmers commended the shop for the services and the savings it is bringing them.

The shop manager reported that the blacksmith, since his employment in February 1942, has been increasingly busy repairing parts and fashioning replacements to conserve the demand for new parts. The biggest single jobs, however, are tractor overhauls. This work increased greatly during the winter months. Three large tractors were on the floor of this shop on March 17, 1942, either waiting to be or in the process of being overhauled.

This cooperative considers its machinery shop an increasingly valuable part of its equipment. As new machinery becomes less available, its increased ability to render service will no doubt become even more appreciated.

#### Noble County Farmers Needed a Repair Service

For a number of years the Noble County Farm Bureau Cooperative Association, Albion, Ind., has sold machinery on an expanding scale. In 1941 its machinery sales volume totaled \$13,452, or about 6 percent of its total sales volume of \$230,000. Until late in 1941 the association was not equipped either with facilities or personnel to provide effective repair services. After an unusually successful 1941 sales record for co-op tractors, the association decided to establish a repair and service shop for farm machinery and motors.

The chief reason for this decision was that adequate repair services were not maintained by the three local competing machinery distributors. Furthermore, by the end of 1941 the cooperative had sold a total of 35 co-op tractors and a considerable quantity of other equipment for which the owners needed maintenance and repair services.

The association hired a young mechanic, who had worked several years for a private distributor of farm tractors and equipment in a nearby county, and at the time of employment was serving his second year with a neighboring county farm bureau cooperative which was not active in machinery distribution. As he was eager to specialize in implements and tractors and had excellent experience for the work, the Noble County association placed him in charge of a small repair shop they had just set up.

After the beginning of war and the rush by farmers to get either new equipment or repairs on used implements, the shop was kept increasingly busy. The fact that the co-op's shop was the only one in town added to the demand for its services. In February, when a local automobile distributor discontinued his business, the co-op was able to hire his chief mechanic and to buy much of the garage equipment. In March the co-op took on a second mechanic from the same garage to work on tractor and general repair jobs. The cooperative, at the time it was visited, was considering renting the unused garage building to acquire adequate room and facilities for its expanding shop work.

This association reported that the general tendency of farmers in its area during the early months of 1942 was to buy new machinery whenever they could get it, even though the equipment which they traded in was not in many cases badly worn. This enabled the cooperative to rebuild and resell promptly a considerable number of used implements and tractors. Painting this reconditioned equipment was believed to be an extremely important point in its salability.

The Noble County cooperative is building up the service end of its machinery line to take care of both the present machinery shortage emergency and the longer time needs of its patrons. To this end the machinery manager has worked out a program of periodic calls on all purchasers of implements and tractors. In this way he aims to avoid misunderstandings and dissatisfaction arising from mechanical defects which can be adjusted when regular check-ups are made. Under this program a 30-day full replacement guarantee is made on new equipment at no cost to the buyer. For a further period of 11 months, the association provides any labor required to repair new equipment, the farmer paying for any necessary replacement parts.

In the words of the machinery manager, "If co-ops will guarantee maintenance during a reasonable time on new equipment, and repair service at fair rates on older machinery, they can easily build farmers' confidence in cooperative services. Those who continue to serve farmers now will receive their patronage when the war emergency is over and when normal conditions again prevail for sale of new equipment."

Cooperatives which have taken on machinery distribution have generally learned that a dealer must follow-up sales with dependable maintenance and repair services. Farm machinery seldom wears out; it more often rusts out. Careful maintenance saves farmers money over a long period and encourages them to do business again with the firm that assisted them to get maximum returns on their equipment investment. This service in promoting economy is one of the basic objectives of farmers' purchasing cooperatives upon which the Noble County cooperative is building its machinery program.

## Careful Planning Builds Goshen Co-op's Business

The Elkhart County Farm Bureau Cooperative Association, Goshen, Ind., entered the machinery business in 1933 as a distributor for a leading machinery manufacturer. Its machinery business has grown regularly each year until in 1941 the volume was \$74,499, or 21 percent of its total volume of sales for the year.

A repair shop has been maintained by this cooperative ever since it started machinery operations. It now keeps four men busy servicing tractors and other equipment. It rebuilds used machinery traded in on new equipment, painting it before resale. This association on the day it was visited reported that 7 tractors were waiting for overhauls. It reported unusually heavy demand for the first 3 months of 1942 for this type of service and for certain repair parts.

To persuade farmers to get their spring repairs early in 1942, the cooperative sent out two of its repairmen in January to inquire of its patrons their repair and equipment needs for the entire year. Thus, it was hoped to even out the spring repair load over several months and to anticipate future equipment orders. Even at that time it was difficult to get deliveries on new equipment and the association attempted to protect its regular machinery customers.

The Elkhart County cooperative has an aggressive and wide-awake management which keeps its service in all lines up-to-date. Its warehouse plant - now almost one-half block in extent - comprises the general offices, a display room for electrical equipment, a modern feed mill, hardware store room, and the implement stock and repair department. The efficient and attractive set-up of each department indicates that the growing volume and service of the machinery division is the result of careful thought and planning by the directors and the manager, who has been in charge for 12 years.

Observation of shop operations during a visit of several hours demonstrated the extent of the demand for repairs and the co-op's ability to serve. Since it has sold several hundred tractors in its area, it must be prepared to give prompt service on repair calls. For this purpose it operates a trailer truck-platform onto which farm tractors can be loaded easily for hauling to the co-op shop. In addition to two trips to the country during one forenoon, a half dozen farmers came into the repair shop either for parts or to inspect new equipment. Each patron was provided with the article needed or arrangements were made to fill his order at the earliest possible time. It was evident that when this association must tell its customers that parts they desire are "out-of-stock," it also makes an effort to obtain them.

Wabash Association Also  
Specializes in Rebuilt Equipment

In 1942 the Wabash County Farm Bureau Cooperative Association, Wabash, Ind., had been engaged in distributing and servicing farm machinery for about 12 years. During that period it has retained the local dealership for a leading make of machinery and tractors. In 1941 its volume of farm equipment business totaled \$73,743, which comprised about 14 percent of its total supply business of \$552,000.

The Wabash County association is well equipped with building and other plant facilities. Its machinery operations are conducted in a building approximately 50 by 150 feet with special areas for office space, for setting up and storing equipment, for repair work, and for loading machinery into and out of the warehouse. In available space and convenience of location for farmers, this machinery warehouse is unusually well suited to its present use.

The association early in 1942 employed six men full time in its machinery department. Besides the department manager who started with the co-op in 1931, there are two general helpers who set up, deliver, and repair machinery, and three specialized repairmen able to rebuild motors and to handle other technical work in the repair shop. The last of these three men, who has had 30 years' experience in local automotive garages, was added early in 1942 in order to enable the cooperative to keep up on the increased demand for repair work.

The machinery manager reported that he was getting ready to install welding equipment in order to do more repair work. He stated that lack of such facilities in the past has caused the association to lose many service contacts that usually lead to later business in other repair lines.

Since December 15, 1941, this association has experienced a heavier demand for machinery repair than in the same period in former years. It reported that approximately six additional tractor overhaul jobs had been listed ahead of the current shop schedule from January to March 1942. Demand for both parts and repairs has been so large as to indicate a general response by farmers to the repair campaign.

The association has always rebuilt the used machinery it takes in trade and resold it to local farmers. In March 1942 it reported that used machinery was scarcer than in any previous year. With used machinery in such demand, the servicemen during the spring of 1942 tried to keep farmers posted about used implements and tractors for sale. This service helped many farmers to prepare for the expanded crop production requested as a war measure.

The Wabash County association's aggressiveness in providing complete and efficient repair services on farm equipment has constantly added to its volume of new business. Its present position as the largest distributor of machinery in its locality now enables it to set a high standard of efficiency and reasonable prices on maintenance services. This valuable service in ordinary times becomes doubly so during the period of wartime scarcity and heavy outlays for upkeep.

#### Ohio Farm Bureau Cooperatives

The Ohio Farm Bureau Cooperative has had a farm machinery program in operation for almost 10 years. In addition to distributing tractors and general farm equipment, the farm bureau cooperatives are gradually adding service repair shops. With the machinery crisis resulting from the war, these are becoming more important in the 30 county cooperatives that have actively distributed machinery.

The State association has traditionally advocated the pooling of orders for one or more carloads of machinery to be delivered to farmers at the car door. Farmers usually unload the units themselves with considerable savings in price compared with the purchase prices of individually assembled pieces, such as mowers and rakes, at retail stores.

The cooperative is applying similar cost-saving methods to meeting the war emergency. For example, it is attempting through its county cooperatives to show farmers that with care and relatively small annual replacements, major pieces of equipment will hold up for many years. Frames and other heavy parts, when properly handled and housed, will serve indefinitely. Replaceable parts, like bearings, blades, and shares, can usually be obtained at a small fraction of the retail price of a new implement. How much such practices can save is shown by one Ohio farmer who still uses his 29-year old mower.

Another means of conserving machinery is through informal exchange of equipment by farmers within neighborhood groups - a traditional practice in Ohio that is getting to be more general. Farmers are being urged by their farm bureau cooperatives to work out further machinery exchanges in their neighborhood study groups or councils. In 1942 these councils are concentrating on such questions as farm labor shortages and how machinery in certain local areas can be pooled.

Cooperative ownership and joint use of larger and more expensive pieces of equipment has also been considered. For the present no action is being taken in organizing such "joint-use cooperatives" until results are available from experiments now being conducted by the Farm Security Administration. Farm Bureau officials point out,

however, that it is usually inadvisable for farmers to undertake joint ownership of machinery as individuals because of certain risks and liabilities.

The Ohio Farm Bureau Cooperative Association assisted its local member associations in securing necessary repair parts for the 1942 "repair now" campaign on farm machinery. This campaign placed a heavy responsibility on the State-wide association because machinery parts are scarce and the demand great. The association plans to continue this service during the war period as long as needed items can be obtained from manufacturers.

The association also has aided through its fieldmen and the Farm Bureau News in the scrap metal collection on farms. Since other farm agencies have primarily sponsored this drive in Ohio, the Farm Bureau Cooperative has deferred active participation until such time as further assistance is needed.

#### Four County Co-ops Afford Examples

Four county farm bureau cooperatives in Ohio present interesting examples of machinery services. None of them has heretofore offered complete repair facilities to farmers. Customarily they have employed one or two servicemen to set up implements, to demonstrate and deliver them to farmers, and, in some cases, to answer service calls and to install replacement parts.

These four associations in 1942 began to feel the need for complete machinery service shops. Since farmers must depend to a greater extent on their old equipment, more service calls were anticipated. To meet the situation the Ashland County Farm Bureau Cooperative, for example, constructed a new warehouse headquarters with space for repairing tractors and other machinery. This organization has distributed farm equipment for several years with very little in the way of facilities for repairs.

The Richland County Cooperative has for several years maintained a machinery warehouse with facilities for repairs and two servicemen. Its work in rebuilding tractors and in supplying repair parts has expanded noticeably since the beginning of the war. It is realized that future opportunities in the farm equipment field are likely to depend greatly on the completeness of services. For this reason, it is endeavoring to meet all farmers' emergency needs.

Two other county cooperatives - one in Wayne County and the other in Tuscarawas County - have made beginnings in a machinery repair program. Compared with a number of other county farm bureau cooperatives, they are not as fully engaged in either distribution or maintenance work on farm equipment. Their managers, however, stressed the importance of meeting farmers' requests for service

on machinery. This they are attempting to do by keeping available at least one first class mechanic. The difficulty of keeping experienced employees and of obtaining machinery parts when needed have impressed upon these associations the desirability of planning their machinery programs several months in advance. To a considerable extent they are finding that the present changing conditions require long-range planning and foresight.

#### Michigan Farm Bureau Cooperatives

The cooperative farm machinery program of Michigan's Farm Bureau Services, Inc., has placed special emphasis since 1940 on providing repair and maintenance services on farm equipment. Since 1934, when this machinery program was begun, constant attention has been given at district implement schools to familiarize cooperative service men with the machinery they handle. Comparatively few of the cooperatives, however, have had complete service departments. The war situation has directed attention toward the need for repair and maintenance work.

The State-wide association has assumed leadership in an expanded service. It maintains a full line of repair parts both at its central machinery warehouse at Lansing and at several branch warehouses in other parts of the State. Repair shops also have been set up in a number of the warehouses for rebuilding tractors and making general repairs on farm equipment. At the central warehouse at Lansing this service is available for used equipment brought in by nearby cooperatives, and for equipment received from branches for resale in other areas.

The program has two main objectives. In the first place it offers full maintenance and repair services on the line of implements and tractors distributed by farm bureau associations for the past 8 years. This responsibility has been of increasing importance as more farmers have acquired cooperative brands of equipment. The cooperatives have been reminded of this need constantly, both by their farmer patrons and by the extent of repair services offered by competing machinery dealers.

A second objective has been to organize sufficiently broad services to meet farmers' special needs growing out of war shortages. Both the State-wide and local cooperatives already have had difficulties in obtaining repair parts and certain types of new equipment. Servicing existing farm machinery in order to lengthen its life is, therefore, a growing concern of the associations.

Farm Bureau Services, Inc., has not undertaken an extensive campaign for collecting farm scrap metal, but it did try during the winter of 1941-42 to get orders for farmers' machinery and parts early. This action proved beneficial to both the cooperatives and the farmers as scarcities developed. Plans are being made to repeat this service in the 1943 season.

The four local cooperatives visited in Michigan were in a position to render some maintenance service on machinery. As in other States, more repair work was needed than the associations could provide. This was attributed to the fact that in the past special emphasis has been placed on distribution problems rather than on servicing and repairs.

A notable exception to this situation exists in the Hamilton Farm Bureau at Hamilton, Mich. Although this association has sold relatively little farm machinery, it is unusually well able to handle machinery repair work because of a complete automotive garage built up in connection with its business as distributor for a well-known make of automobile and truck. The mechanics in this garage have handled increasing numbers of tractor overhaul jobs, and since automobile sales have been stopped, machinery repair and maintenance has greatly increased in importance. This trend is opening up to the association a new field that will probably become a permanent service to farmer patrons.

In Michigan, types of farming areas vary considerably throughout the State. Types of equipment and repair services needed in general farming areas are not the same as in the fruit growing areas, or in truck farming and sugar beet growing districts. These variations have made it difficult to develop large volumes of business in a few important equipment lines. Earnings also are usually adversely affected by such conditions. Attempts to establish successful machinery service shops in specialized production areas call for close attention to number of machines likely to require servicing, as well as the variety of special equipment required. Up to the present, therefore, Michigan farm bureau cooperatives have used the co-op tractor as a basis for a long-time machinery distribution and maintenance program.

#### Farmers Union Central Exchange, St. Paul, Minn.

Farmers Union Central Exchange of St. Paul, Minn., has adopted a number of concrete policies to gear its farm machinery operations into the war needs for metals. This wholesale association has more than 300 local member cooperatives in Wisconsin, Minnesota, North and South Dakota, and Montana. Through these locals, which are primarily petroleum associations, it has distributed each year large numbers of machinery parts, implements, and tractors.

Even before the United States entered the war the Central Exchange had initiated a vigorous program to get farmers to place early orders for machinery repairs. In a circular letter sent to each of its locals on December 2, 1941, it stated that "serious problems are ahead of us in 1942 if we do not act at once to determine what repair and replacement items are needed for farm machinery."

To obtain complete information from farmers in its territory on their probable 1942 demand for parts, a detailed farm survey was made. The wholesale association sent to each of its locals triplicate copies of a survey form which called for detailed listing by farmers of their probable requirements. The form was set up to include repairs on tractors, binders, combines, mowers, plows and disks, and for miscellaneous equipment such as rope, belting, bolts, nuts, nails, tools, and wire. Several thousand farmers completed these blanks, one copy of which was left with the farmer, one retained by the local association, and the third sent to the Central Exchange.

In the scrap metal program, Central Exchange, working through its 300 member associations, has played a two-way role. It urged local cooperatives to inform farmers of their obligation to contribute their scrap, and it determined for them the nearest steel mills to which to ship the salvaged metal.

First, it spotlighted the subject with weekly news letters to local cooperatives, in which pertinent quotations were supplied from governmental publications like Victory. Data were included that showed the need for armament industries for metal and the vital part that several million tons of farm scrap iron can play in the war program. An example of its publicity on this subject is the following from its letter of January 30, 1942:

#### Scrap Iron

"There is a serious shortage of scrap iron at the mills. There is a large amount of scrap iron in the country on almost every farm.

"Tremendous tonnage of scrap iron is needed now in order for many mills to keep up their production of steel for national defense and for civilian uses.

"Farmers need steel in the form of wire, nails, posts, sheets, etc. The more scrap iron we can get to the mills, the greater are the possibilities of the mills producing sufficient steel for national defense and civilian needs.

"This is no time for mills to shut down due to lack of scrap iron. It is not reaching the mills fast enough through the normal scrap iron channels. Therefore, in the interest of national defense and our whole economy, we believe it is time for the cooperatives to take a hand in things and try to accumulate carloads of scrap iron for shipment to mills.

"We know that means some hard work. The cooperatives will not have any income from it but after careful

analysis, we believe that for the 'long pull' we will be better off and will be rendering a service to the farmers who still have some scrap iron, and at the same time be performing a patriotic service."

This program, started in January 1942, had resulted in 6 car-loads - about 500,000 pounds - of scrap iron being shipped to steel mills up to February 20. It was expected that this record would be doubled as the campaign accumulated momentum through wider publicity. Local cooperative managers were responsible for soliciting scrap deliveries from farmers so that a pooled carload - 75,000 pounds - could be assured.

A gondola car was then ordered and certain days set for hauling the metal from farms and loading it directly on the car. Farmers received local scrap prices, based on levels established by the Office of Price Administration, after the buying company sent the money to the cooperative. Each farmer's contribution to a particular carload was weighed and his share of the proceeds were based on his proportional contribution. Pro rata deductions were made from payments for any expense incurred in hiring special labor in loading the car and to cover adjustments in case the weight reported by the buying company was less than that recorded at the time of shipping. Neither the local cooperatives nor the Central Exchange charged for their services in organizing the undertaking or in keeping records and making disbursements.

#### Machinery Repair Services by Farmers' Union Locals

Approximately 300 local cooperatives affiliated with the Central Exchange are petroleum associations with retail filling stations equipped to render repair services on automobile and other motors. Only a small number, most of them in North Dakota and Montana, operate complete machinery and tractor repair shops. Associations that have sold a considerable number of machines and tractors employ a service man to maintain and rebuild tractors and other equipment. During the winter months of 1942 this work increased greatly in volume.

The demand for repairs in rural communities is illustrated by the experience of two of the local cooperatives. One of these employs two motor repairmen who have been kept busy overhauling farm tractors as well as automobiles. This association has also developed a prosperous general repair service on radios, washers, and other electrical equipment. While this diversified service grew out of the lack of private shops in this small community, it demonstrates the wide demand in most rural areas for a variety of services in connection with mechanization and electrification of agriculture. Shortage of experienced repairmen has threatened to reduce repair work in this association.

The other local cooperative is located in an intensive dairy area where farm milk trucks are much more numerous than tractors. It has handled very little farm equipment as a distributor, but is doing an excellent job of supplying automotive accessories and installations. Truck operators have been able to save by purchasing cooperatively such equipment as magnetos, distributors, and spark plugs, as well as by getting such services as valve grinding and other repairs. This cooperative operates one of the largest retail petroleum filling stations in the area and has substituted these accessory services to offset its loss of tire sales.

In their machinery program, the Farmers Union supply cooperatives generally have emphasized diversified repair services and parts in building a permanent equipment distribution program. This has enabled the associations to increase their activities as the farm demand for emergency repair services has intensified. The co-op machinery program thus fits naturally into this wartime need for repairs, and also builds a stronger foundation for machinery service after the war.

#### MACHINERY SERVICES BY TWO LOCAL COOPERATIVES

Aside from the cooperatives which are operating machinery distribution and repair programs with the assistance of their wholesale associations, there are many other local associations throughout the country which have built up successful individual records in machinery services. A description of two such associations illustrates some progressive features possible in local cooperative machinery repair shops.

##### Farmers Cooperative Society, Inc., Danevang, Tex.

In Wharton County, Texas, is located the Danevang Farmers Co-operative Society, Inc. This association now operates a variety of services including two cotton gins, a hardware store, a grocery and meat store, a gasoline and oil distribution station, and since 1937, a welding and repair shop for farm tractors and general equipment. Danevang is a small farm community which is now almost 100 percent cooperative. Its first cooperative venture after the community was settled was the Danish Mutual Insurance Association organized in 1897 for fire protection.

The welding and repair shop grew out of the rapid development of the hardware store, established in 1926, and the urgent need of a general repair service for farm tractors, automobiles, and general farm machinery. By 1935 a new and larger building was needed to handle its business, which had expanded to include machinery parts and tractor and automobile accessories. This cooperative does not handle new farm machinery or tractors.

For several years the farm equipment of this strictly rural community has kept two mechanics busy - one on tractors and the other on automobiles. Additional general helpers are added to the shop during its busiest periods. Practically all repair jobs are performed in the shop, although occasional service visits are made to farms. Repair work in the shop is charged for on a time basis, with all parts or materials for repair jobs bought by the patrons at the hardware store. Repairmen are paid specified rates per hour.

The repair shop is operated to render first-class service and aims primarily to cover the cost of workmen's services and overhead costs for equipment, tools, and shop quarters, with some allowance for supervision. This arrangement has resulted in moderate costs to farmer patrons, since the usually high overhead and labor charges of competitive repair services have been avoided.

Services rendered by this welding and repair shop have grown consistently. Especially in the last 2 years its value to local farmers has been proved increasingly as new farm equipment has risen in cost and, lately, been unavailable at any price. According to the manager of the cooperative society, its members say they will never again be willing to get along without their own general repair and utility shop. It represents an indispensable unit in the cooperative community of Danevang, where farm people more and more are performing services for themselves, providing their own people with employment, and making their incomes cover as much as possible.

#### Farm Bureau Cooperative Exchange, Roseburg, Oreg.

In 1926 the Douglas County Farm Bureau Cooperative Exchange of Roseburg, Oreg., began repair and maintenance service for farm equipment.<sup>3/</sup> Since that time the shop has prospered and become an important part of the cooperative's whole program. This supply association handles a wide variety of equipment including farm implements and tractors, plumbing fixtures and supplies, light and water systems, and electrical supplies. It also does a large business in petroleum products and feeds, and in grain and seeds.

Repair shop services were begun primarily to service the various types of equipment sold to farmers. A small start was made with modest shop equipment and expansion took place gradually as patronage of the shop justified further outlays. While the directors were convinced repair service was necessary to carry on an equipment business successfully, they insisted that it should start small and grow soundly. In 1941, with sales of farm equipment amounting to \$79,000, sales of repair parts to \$20,000, and machinery inventory stocks to \$25,000, all labor and service charges in the repair shop amount to about \$9,000.

<sup>3/</sup> For further information on the machinery program of this cooperative see *News for Farmer Cooperatives*, August 1942.

Like most machinery repair services, the bulk of its work is performed in the shop with occasional work performed on farms, usually in cases of emergency. Shop work consists of custom jobs on farmers' equipment and rebuilding of trade-in equipment intended for resale. The work is high-grade with emphasis on customer satisfaction, rather than on a low-priced job that may bring complaints instead of new business.

The shop is equipped with a lathe, hydraulic press, drill press, forge, triphammer, electric and acetylene welders, overhead chain hoists, and adequate small tools. This equipment is used by five mechanics, including a blacksmith. A sixth worker acts as timekeeper and liaison man between the shop and the parts department. The personnel and equipment are kept busy through a system which gives priority to custom jobs and provides a backlog odd-time work on used equipment in need of rebuilding. Success of the shop in keeping busy, however, is attributed to the wide range of equipment and the repair services offered, which includes plumbing installations and maintenance, electrical wiring and servicing, and the usual types of implement and tractor repairs. The manager says that "equipment costs are an acute problem with most farmers and comprise a large part of their production costs." Therefore, it has been only common sense for the association to develop these services, for "to admit inability to serve efficiently in such an important field is unthinkable."

An outstanding accomplishment of the Cooperative Exchange is in keeping sufficiently detailed records of repair shop operations so that job costs and earnings are obtainable on each item of work. As a result it is possible to compare savings and losses on new equipment sales, custom repairing, and reconditioning of old machinery. In a shop of such varied services and operations, lack of fairly detailed costs and earnings records would leave a manager unprepared to find the leaks and to plug them in time.

In making charges for work, prevailing rates per hour in local shops are used. Retail prices for repair parts and any steel used are kept at established levels. At the end of a year, refunds are paid to patrons on repair charges and plumbing and wiring service the same as for commodity sales. In making refunds, nonmembers are entitled to the established rate, but receive their refunds in membership stock until they have become members.

As a result of following a policy of broad repair services to meet every farm need, operating on a businesslike basis with standard prices, high quality workmanship and materials, and complete records, this association has built a reputation for dependable repair work and fair treatment in distribution of shop earnings.

## AN EXPANDING NEED FOR COOPERATIVE EFFORT

In the preceding pages there have been cited some of the activities of farm supply cooperatives in helping farmers to adjust themselves to the shortage in farm machinery and equipment brought about by the war. There have been noted some of the most progressive programs and methods used by cooperative supply associations.

Farm cooperative leaders and officials in the machinery industry believe that new farm equipment may become more scarce and that the consequent demand for repair parts and services on old equipment is now only in its early stages. It may be expected that, as a result of further conversion of industry to war production and restriction of farm machinery output, farmers' demands for repair parts and services will be much greater in 1943 than they have been in 1942. To meet this expansion, farmers' cooperatives must look for facilities, repair equipment, and trained workers. Locals that have already started to do this are getting into favorable positions to help, if the equipment supply situation becomes critical.

Many garages and distributors, now that they cannot sell and service new cars, are providing a greater variety of repair services. Local cooperatives that operate retail fuel stations should likewise be able to expand their services to include repair work on farm automobiles, trucks and tractors. A number of locals already have acquired garages and repair equipment from automotive concerns going out of business. It is important for cooperatives to realize that they have a permanent membership requiring services and that in a time like the present, emergency opportunities arise to add activities that have been discontinued by other concerns in the communities. Taking advantage of these opportunities need not involve large capital outlays, but may enable co-ops to utilize present labor and facilities to a greater degree, to extend their services, and at the same time to supplement their incomes.

In contrast to this policy, farmers' cooperatives in many localities have acquired a reputation for incomplete maintenance and repairs on the equipment they sell. In the farm machinery trade it is generally considered essential to success for a retail distributor to provide service on his lines of equipment. In exceptional cases a dealer may sell equipment at a nominal mark-up with the understanding that he assumes no responsibility for its maintenance or for carrying repair parts. This policy, however, is contrary to wishes of most farmer patrons and does not help to build a strong and permanent retail machinery business.

### Repair Services Can Be Gradually Expanded

Experience of many cooperatives indicates that repair shop services may be started on a small scale and expanded gradually.

If repair services are offered in conjunction with a broad equipment distribution program, initial demand for shop work is likely to be strong. Types of repair work should certainly be as diverse as farmers require and as equipment and personnel will permit. With the increasing variety of mechanical equipment on farms, cooperatives have a great responsibility to their patrons for determining the standards of performance and efficiency of repair services in their localities.

Another important service of cooperative repair shops is to develop rural centers for a wide variety of mechanical activities related to agriculture. A number of cooperatives are seriously interested in gradually building such service centers, in part as a means of providing employment to rural young people. With the incentives provided by the war to further repair and maintenance work on farm equipment, an opportunity is presented for more cooperatives to initiate repair centers. These may later take on additional services, such as assembling farm implements and tractors shipped from the factory in carlots. Such a trend might ultimately help to revitalize farm communities through keeping the farm income in the rural areas and thus make them more self-sufficient in both employment and purchasing power.

During the war cooperatives can do most to help the machinery conservation program through devices that will enable the limited number of machines to accomplish the food production job. These devices include (1) encouraging early ordering of essential equipment and parts, (2) conducting machinery schools for repairing and conserving present equipment, (3) helping to organize machinery exchanges so that idle equipment can be made available to farms needing it, and (4) assisting farmers to apply cooperative methods in organizing joint ownership machinery associations. All these devices offer sources of considerable savings to farmers in their ownership and use of equipment.

Costs of machinery repair parts and services have always been high compared with costs of assembled implements. This fact accounts for much of the past cooperative efforts to bring about savings for farmers. It also justifies many other cooperatives in adding these services at the present time.

The present activities as well as the future progress in cooperative distribution of farm machinery may depend to a considerable degree on how aggressively local cooperatives undertake to develop repair business during the next few months. If farmers are satisfactorily serviced by cooperatives during the emergency, their patrons will be encouraged to support them in their long-time machinery program.

